**Mustafa Sheikh**

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**SKILLS**

**Software:** Python | C++ | C | Git | Bash | MATLAB |Simulink | Julia Language

**Engineering:** Agile | CAN | DFSS Black Belt | | HIL | DoIP

**WORK EXPERIENCE**

**General Motors,** Warren, MI

Virtual Hardware Application Engineer/Scrum Lead Nov2022 – Present

* Secured buy-in from Technical Specialists, Release Engineers, Program Teams, and Senior Management for proposed virtualization strategy for highly complicated Wireless SOCs.
* Led scrum team of 12 talented and motivated engineers under SAFe framework.
* Devised and proposed criteria to benchmark virtualization platforms that will run Production SW.
* Worked with virtual validation and integration teams to resolve issues in virtual ECUs for CI/CD pipeline.

Senior Connectivity Development EngineerSep2020 – Nov 2022

* Laid the groundwork for Over-the-Air update process for legacy Connectivity Modules along with Systems Engineers and Subject Matter Experts.
* Established and led project specific cross-functional scrum meetings which helped drive transparency while resolving long standing issues and bringing feature development back on track.
* Took initiative to lead development of critical Connectivity features that were at risk of falling off-track.

**FAW US Research and Development,** Plymouth, MI

Autonomous Vehicle Controls EngineerFeb 2020 – Aug 2020

* Prototyped model-based development and testing using Automated Driving Toolbox in MATLAB/Simulink.
* Developed Object Oriented MATLAB scripts to analyze CAN data from MobilEye EyeQ4 system enabling quick analysis of system data generated by Real-Time models on dSPACE MicroAutoBox interfacing.

**Molex Connected Mobility,** Rochester Hills, MI

Automation Solution DeveloperJan2019 – Feb 2020

* Developed robust Python scripts to flash firmware for AV vehicle fleet in the field under time pressure. Reduced turnaround time of flashing procedure by 70% with respect to manual procedure.

**Ford Motor Company,** Dearborn, MI

Senior HIL Automation EngineerApr 2013 – Nov 2018

* Led license restructuring efforts that simplified and optimized ~$80k worth of wasted software licenses allowing lab to scale up from ~10 to ~40 engineers.
* Pioneered and led integration and extension of Python based automation tool for Ford Sync saving 100s of hours of human testing time: enabled lab to test touchscreen HMI at scale for the first time.
* Managed ~$125k annual budget for renewal of software licenses in a lab of ~40 engineers.

HIL EngineerJun 2012 – Apr 2013

* Took initiative to improve maintainability for Robotic HMI test solution via code refactoring and data structure simplification: reduced setup time by 50%.
* Led and managed part selection for 3 separate HIL Simulator programs by coordinating with purchasing, design & release engineers, and suppliers to select parts from full vehicle BOM.

**EDUCATION**

BSc in Physics, University of Windsor

BSc in Electrical Engineering, University of Windsor